

CITY OF HAYWARD

AGENDA REPORT

AGENDA DATE 09/16/03

AGENDA ITEM 6

WORK SESSION ITEM _____

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT: Introduction of Ordinance to Adopt Revised Hayward Municipal Water System Code

RECOMMENDATION:

It is recommended that the City Council introduce the attached ordinance pertaining to the Hayward Municipal Water System.

DISCUSSION:

The Hayward Municipal Water System chapter of the Municipal Code (referred to as the Water Code) governs water distribution service provided to customers by the City. Although periodic revisions and additions have been made to specific sections of the Water Code, it has not been comprehensively reviewed and revised in a number of years to ensure that the provisions are consistent with current practice and state and federal requirements for operating a public water system. In order to bring the document up to date, staff has performed a complete review and is recommending adoption of a revised Water Code that incorporates a number of revisions to mainly update technical information, clarify language, and reflect practices and requirements that are currently in place.

Most customers will not be impacted by other revisions, as the modifications make the Water Code consistent with the City's current practices and legal requirements. For example, the revised Code deletes sections pertaining to refunding procedures for water main extensions, as this process is now guided by the Local Improvement Benefit District Ordinance. Revisions to other sections serve to codify existing procedures and requirements.

One section has been modified to place new restrictions on customers related to the use of temporary water service for construction work. Water usage for construction projects is generally measured with a portable hydrant meter, and there have been issues in the past with unreturned meters and failure to provide meter readings. Code authority is proposed that would allow staff to remove meters from the possession of contractors who fail to provide timely meter readings, and disallow future use of Hayward water.

Cross-Connection and Backflow Control

The State of California Department of Health Services requires the establishment of Cross-Connection and Backflow Control Program to protect public water supply systems from contamination due to actual or potential cross-connections between the public supply and other water sources that may be unsafe. While the City has been implementing such measures for many years, the existing language in the Water Code is not adequate to meet State requirements. The proposed regulations comply with the State requirements and provides for the continuation of an effective program.

Generally, the regulations give the City authority to:

- require installation of approved cross-connection and backflow prevention devices, where necessary, before water service is supplied;
- terminate existing water service until approved devices are installed, if staff determines that a hazard to the City's water supply exists;
- inspect premises to evaluate the potential for cross-connection and backflow contamination.

The State has provided a model ordinance to ensure that all required provisions are included. Staff has adapted the model for City use and is recommending that the City Council adopt the appendix to the Water Code.

Public Notice

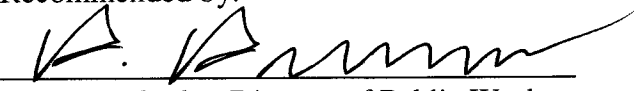
Notice of the introduction of the proposed ordinance was published in the *Daily Review*. Since no individual group of customers would be significantly impacted by the changes, no other notices were issued.

Prepared by:

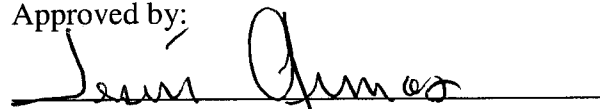


Alex Ameri, Deputy Director of Public Works

Recommended by:

for 
Dennis L. Butler, Director of Public Works

Approved by:


Jesús Armas, City Manager

Attachments: Exhibits A: Revised Hayward Municipal Water System Ordinance
Exhibits B: Proposed Cross-Connection and Backflow Control Regulations

DRAFT

9/12/03
NH

AN ORDINANCE AMENDING CHAPTER 11,
ARTICLE 2 OF THE HAYWARD MUNICIPAL
CODE BY ADOPTING A REVISED HAYWARD
MUNICIPAL WATER SYSTEM CODE

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hayward hereby ordains as follows:

Section 1: Chapter 11, Article 2 of the Hayward Municipal Code is hereby amended by adopting a revised Municipal Water System Code, to read in full as follows:

"ARTICLE 2

"HAYWARD MUNICIPAL WATER SYSTEM

"11-2.00 DEFINITIONS. For the purposes of this Article, certain words and phrases are defined and certain provisions shall be construed as herein set out, unless it shall be apparent from the context that a different meaning is intended.

"(a) APPLICANT. Any person, business, organization, or agency that applies for water service.

"(b) BACKFLOW PREVENTION. Prevention of a condition, caused by a differential in pressure, that causes the flow of water or other liquids, gases, mixtures or substances into the distributing pipes of a potable water supply from any source or sources other than an approved water supply source.

"(c) CROSS-CONNECTION. Any unprotected actual or potential connection between a potable water system and any source or system containing water or substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other assemblies through which backflow could occur, shall be considered to be cross-connections.

"(d) CUSTOMER. Any person, business, organization, or other agency that obtains water from the Hayward Water System.

"(e) FIRE SERVICE CONNECTION. A service connection to furnish water solely for extinguishing fires or testing of fire fighting systems.

"(f) HAYWARD MUNICIPAL WATER SYSTEM. All of the property, heretofore or hereafter constructed and/or owned by the City of Hayward, for the treatment, storage and distribution of water. It includes land, reservoirs, pipes and appurtenances, pumping stations, wells, and all other general property. Also known as Water System.

"(g) METER. A device used to measure the quantity of water delivered to a customer.

"(h) PREMISES. Any lot, piece or parcel of land, any building or other structure or any part of any building or structure used or useful for human habitation or gathering or for carrying on a business or occupation. Any other unit that can be separately owned, such as a condominium unit, shall also be considered one premises.

“(i) SERVICE CHARGE. A fixed bi-monthly charge for customer service, meter reading, billing, and meter maintenance.

“(j) WATER USAGE CHARGES. A charge based on the volume of water delivered to a customer during a bi-monthly billing period.

“(k) WATER DISTRIBUTION MAIN. All pipelines owned by the City and used to distribute water to individual customers.

“(l) WATER FACILITIES FEE. A fee that is paid to: (a) buy in to existing public water system facilities; and (b) fund the future construction of facilities needed for development. The Facilities Fee paid therefore represents the proportion of the existing system that will be used by the new customer and the proportion of costs of future projects that will be needed to serve the new customer.

“(m) WATER SERVICE CONNECTION. The physical connection of the customer’s pipe with the City’s pipe, meter, or other facility owned by the City.

“SEC. 11-2.01 WATER SERVICE. APPLICATION. All persons desiring water service from the Hayward Municipal Water System shall make application therefor at the Utilities Administration Division of the Department of Public Works for a new connection or at the City of Hayward Revenue Office for activation of an existing connection.

“Said application shall be made in the manner prescribed by the Director of Public Works and shall be subject to approval of the Director of Public Works or authorized representative.

“SEC. 11-2.02 APPLICATION DEPOSIT - PERMANENT SERVICE. Applicants are required to establish and maintain credit to the satisfaction of the Director of Public Works or authorized representative. A deposit is required from all customers who have not established credit with the water system. The deposit for a single-family residential customer shall be in an amount approximately two times the estimated bi-monthly billing but in no case less than \$80. The deposit for a multi-family residential customer shall be in an amount equal to \$80 times the number of residential units, or an amount equal to two billing periods if customer’s average water consumption is known. The deposit for a commercial or industrial customer shall be in an amount equal to an estimated bi-monthly billing period.

“When service has been commenced to a customer with the understanding that the deposit shall be paid and such deposit is not made within five days, service may be discontinued until such deposit and any connection charges are paid.

“The deposit shall be retained for two years from the date of deposit and is then subject to refund to the customer if the service has been continuous and bills have been paid within 35 days from date of billing. If service is discontinued during this period, the deposit less the final bill will be refunded. No interest shall be paid on customers’ deposits.

“Deposits which remain unclaimed at the expiration of four years from the date of service termination will become the property of the Water System.

“SEC. 11-2.03 STANDARD SERVICE CONNECTIONS. Standard service connections shall consist of 3/4 inch service pipe and 5/8 x 3/4 inch meter.

"Applicants may have a larger connection if they desire, provided that the Director of Public Works determines that sufficient water supply is available and that a larger connection will cause no adverse impact on water service, including fire protection. Larger connections shall also be approved if required by the Fire Department. Applicant shall pay for the difference in cost between the standard service and a larger connection.

"The Director of Public Works or authorized representative reserves the right to determine the location of each meter and service connection.

"No person other than an authorized City of Hayward employee may connect water service to, or disconnect water service from, a Water System facility.

"SEC. 11-2.04 WATER SERVICE CONNECTIONS. INSTALLATION COSTS. Where a service connection is already in existence, a meter activation charge shall be paid by the applicant to cover the cost of reinstating such service.

"The applicant shall pay all costs of installing a new water service connection if a water service connection is not already installed on the premises or if the existing water service connection does not meet Water System standards.

"Service connection (installation) fees for services and meters that are two inches or smaller shall be in accordance with fixed rates set by resolution of the City Council, unless otherwise determined. Service connection (installation) costs for meters that are larger than two inches will be calculated by the City based on time and materials and will include: costs of all materials, including, but not limited to, fittings, valves, pipe, meter, meter box, plus 5 percent of the total cost of materials for storage and handling; labor and equipment costs, including, but not limited to, necessary sawcutting, concrete, asphalt patching, and spoils disposal; other costs incurred due to any peculiarities of the installation; and 3 percent of the total of the preceding items for administrative costs.

"In the event that an applicant decides not to complete the installation of the water connection, the costs of any work already performed related to the water connection will be deducted from the fees and the remaining fees will be returned to the applicant.

"SEC. 11-2.05 ESTIMATE FOR SERVICE CONNECTION CHARGES. The Director of Public Works is hereby empowered to cause estimates to be made and to fix the charges for service connections based on the assumption that the water distribution main is located on the center line of a public street, alley or way and that there will be used 24 lineal feet of service pipe, notwithstanding that said water distribution main is actually located other than on said center line.

"Services larger than two inch, and unusually long or difficult service connections of any size, may be charged for on an actual cost basis.

"SEC. 11-2.06 CHARGES PAYABLE IN ADVANCE. All service connection charges shall be due and actually paid before any work is commenced.

"SEC. 11-2.07 TITLE TO METERS AND MATERIALS. Title to all meters and materials used in making a water service connection shall be with the Hayward Municipal Water System.

"SEC. 11-2.08 WATER SERVICE METERS. INSTALLATION. Water service

meters shall be installed only in public streets, alleys or ways, or in areas designated by the Director of Public Works. It shall be unlawful for any customer to enclose by a fence or wall or otherwise obstruct access to water service meters unless prior approval is obtained from the Director of Public Works and arrangements acceptable to the Director of Public Works have been made for convenient access.

“SEC. 11-2.09 WATER SERVICE CONNECTIONS. BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL. Appendix A, entitled ‘Control of Backflow and Cross Connections,’ attached hereto and by such reference incorporated herein and made part of as though set forth in full, is hereby adopted.

“SEC. 11-2.10 SERVICE CONNECTION TO SERVE ONE PREMISES. No one service connection shall service more than one premises.

“SEC. 11-2.11 SERVICE CONNECTION TO EACH CUSTOMER DISCRETIONARY. Where more than one customer is supplied through one service connection and one meter, the City shall hold the owner of the property (or other person, if agreed upon by all parties including the City) responsible for payment of all water furnished through said one service connection and one meter.

“Where practicable to serve each customer through a separate service connection, the City, at its sole discretion, may install separate service connections and meters for each customer at the property owner's or customer's expense, and collect at the established meter rates for water supplied through each meter.

“SEC. 11-2.12 HYDRO-PNEUMATIC WATER SYSTEMS PROHIBITED. It shall be unlawful to construct any hydro-pneumatic water system in the City of Hayward with the exception of any such system meeting all of the following criteria:

- “(a) The system is located on private property on the service side of the meter;
- “(b) The system serves only one single family residence; and
- “(c) Provisions of Section 11-2.09, Backflow Prevention and Cross-Connection Control, are met.

“Notwithstanding the foregoing, it shall not be unlawful to repair or maintain a hydro-pneumatic water system constructed before the effective date of this section or lawfully installed hereafter.

“SEC. 11-2.13 METER MAINTENANCE. All water meters shall be maintained, repaired, and replaced by the City.

“Where replacements or adjustments for any meter or service are necessary by the act, neglect or carelessness of the owner or occupant of any premises, any expense thereby caused to the City shall be charged against and collected from the owner or occupant of the premises.

“SEC. 11-2.14 METER TESTING. Any customer desiring a test to be made on the accuracy of his water meter may deposit with the City Revenue Office an amount determined by the Director of Public Works or authorized representative to be the estimated cost of conducting the test, and the test will be made accordingly. The customer shall be notified at least

24 hours in advance and must be represented at such test.

“If the meter is found to over-register more than 3 percent to 5 percent depending upon the type of meter and in accordance with Suggested Accuracy Test Flow Rates issued by the American Water Works Association, an accurate meter shall be installed, the deposit shall be repaid to depositor, and the water bill adjusted to correct the error discovered and to refund the overcharge to the customer subject to the time limitations of this section.

“If the meter is found to be correct or to register less than the actual quantity of water passing through it, the City shall retain the deposit.

“If the meter is found to register more than 10 percent less than the actual quantity of water passing through it, the City shall bill the customer for the amount of undercharge.

“In no case shall adjustment for overcharge or undercharge exceed the period in which the meter was in use by the customer requesting the test, or for more than six months, whichever is less.

“SEC. 11-2.15 ERRONEOUS METER. Whenever a meter fails to register correctly, the customer’s water service charge shall be based on an estimated amount of water used, utilizing the customer’s consumption during the same season of the previous year, if conditions were unchanged. If prior consumption is not available, or if conditions are not the same, charges shall be based upon a reasonable comparison with the use of other customers during the same period receiving the same class of service under similar circumstances.

“SEC. 11-2.16 CONNECTION TO METER. Whenever any person connecting service pipes to the property side of the meter uses the water for testing pipes, said person shall shut the water off from unoccupied premises before leaving same, and in all cases leave the meter box properly installed to full depth in the ground or sidewalk, with the cover securely fastened in place.

“SEC. 11-2.17 WATER SERVICE INSPECTION. Duly authorized employees of the City shall have the right of access for the purpose of inspection at all reasonable times to any premises where water is used.

“If employees are refused admittance to any premises or are otherwise prevented from making an inspection, the City may cause the water to be shut off from said premises after giving at least 24 hours’ notice to the owner or occupant of said premises. If, in the opinion of the City, a clear and immediate hazard to the potable water supply exists, water shall be shut off from said premises immediately and water service shall not be reinstated until such time as the hazardous condition is eliminated, at the customer’s expense, to the satisfaction of the Director of Public Works.

“SEC. 11-2.18 DISCONTINUANCE OF SERVICE. Application to discontinue water service shall be made at the City of Hayward Revenue Office not less than two days before the date on which discontinuance is desired.

“Water Service application deposits, less any outstanding monies owed for water service charges or sewer service charges, shall be refunded to the customer.

“SEC. 11-2.19 WATER LINES, AUTHORIZED PERSONS TO TAP. No person except an employee of the City’s Water System or a person acting with written permission

of the Director of Public Works or authorized representative shall tap any of the water pipes of the main line or distribution system, or insert tees, stop-clocks or ferrules therein.

“Where service pipes are found disconnected at the corporation cock they shall be reconnected only by an employee of the Water System or a person acting with written permission of the Director of Public Works or authorized representative.

“SEC. 11-2.20 FIRE SERVICE CONNECTIONS. When an application is made for commercial or industrial/multi-family residential fire service connections, such fire service installation shall be not less than four inches in size (diameter). When an application is made for residential fire service connections, such fire service installation shall not be less than one inch in size (diameter). The City of Hayward Fire Prevention Bureau and/or City of Hayward Public Works Department shall approve commercial and industrial fire service connections before such service is turned on. The City of Hayward Fire Prevention Bureau and/or City of Hayward Building Inspection personnel shall approve residential fire service connections before such service is turned on.

“Each fire service shall have installed therein a detector check valve of such pattern and design in accordance with City of Hayward Standard Details. The installation shall be approved by the Fire Marshall or authorized representative and/or the Director of Public Works or authorized representative.

“A "detector check valve" is defined as a spring-loaded or weight-loaded swing check valve equipped with a metered by-pass.

“Water furnished through any approved fire services (i.e., fire hydrants, underground fire service lines for automatic fire sprinkler systems) shall be used only for extinguishing fires or for authorized testing of the fire protection system(s). Whenever a customer wishes to test the fire service, the customer shall notify the City of Hayward Fire Prevention Bureau, City of Hayward Fire and Police Dispatch Communication Operator, and the Hayward Water System at least 24 hours before making such test.

“SEC. 11-2.21 EXISTING FIRE SERVICE CONNECTIONS. All existing fire service connections must be equipped with a detector check valve. When an existing fire service connection is not equipped with a detector check valve, a detector check valve, approved by the Fire Department, shall be installed within 30 days' notice from the City of Hayward.

“If it is found that an unauthorized connection has been made or that an unauthorized use has been made of the fire service connection, the customer shall be notified to discontinue such unauthorized connection or use; and if said customer fails or refuses to do so, the water to said service shall be shut off, and not turned on again until an appropriate meter has been installed. The City of Hayward Fire Prevention Bureau shall be immediately notified and said customer shall be responsible for obtaining a 24-hour fire watch while the service is shut off. A detector check valve shall be installed within 30 days of reinstatement of water service.

“SEC. 11-2.22 TEMPORARY WATER SERVICE. CONSTRUCTION WORK.
All water furnished for construction or related work shall be measured through a water hydrant meter provided by the City and shall be paid for by the customer at the same rates as metered consumption.

“The size of the meters and other materials provided will be determined by the Director of Public Works or authorized representative. A deposit to cover the full cost of

replacement of the meter and backflow assembly and the estimated cost of water consumption for two months will be retained by the City at the time application is made to insure the safe return of all materials and supplies and the payment of water usage charges. In the event that meter is not returned or is returned damaged, the City shall retain the deposit and the Customer shall pay for any additional costs incurred as a result of the unreturned meter.

"The service charge and a minimum monthly consumption amount on all hydrant meters shall be based on a rate schedule as specified from time to time by resolution of the City Council.

"It shall be the responsibility of the customer to return all hydrant meters to the Water Distribution System Office within the first five working days of each month to be read, inspected, and reissued if necessary. If not brought in by the fifth working day of the month, the Utilities Superintendent may cause the meter to be located in the field and read, inspected, and reissued if necessary. An additional service charge shall be applied to the bill for this service. Customers who fail to bring in a hydrant meter to be read and inspected for three consecutive months will no longer be permitted to use Hayward water and meter(s) shall be removed from the field.

"Customers who fail to return hydrant meters to the Water Distribution System Office shall pay for the cost of replacement.

"SEC. 11-2.23 CONSTRUCTION WORK. WATER SERVICE PERMIT REQUIRED. All persons desiring to use water in construction work, where connections must be made to a City hydrant or standpipe, shall obtain a written permit from the City before making such connection, and such permit shall be exhibited upon the work for which issued.

"SEC. 11-2.24 FIRE HYDRANTS. Fire hydrants are provided for the sole purpose of extinguishing fires and are to be opened and used only by the City of Hayward Water System and City of Hayward Fire Department or such persons as may be officially authorized to do so. Persons responsible for unauthorized use of a fire hydrant will be assessed a penalty, established by City Council.

"Any person authorized to open fire hydrants shall use only an approved spanner wrench and shall replace the caps on the outlets when not in use.

"SEC. 11-2.25 STREET WORK. REMOVAL OF WATER SYSTEM FACILITIES. All persons engaged in street work shall give at least ten days' written notice to the City for the removal or displacement of Water System facilities that may interfere with such street work, and any damage resulting to said facilities from failure to give such notice shall be charged against the person engaged in such street work. Longer notice may be required, at the sole discretion of the Director of Public Works or authorized representative, for removal or displacement of large water mains or mains that are located on heavily traveled streets.

"All costs involved in the removal or displacement of such facilities, and necessary work to backfill, repair and repave the street, shall be paid by the person engaged in such street work, except where provisions of County or State encroachment permits state otherwise.

"SEC. 11-2.26 PLANS AND SPECIFICATIONS. FIRE SERVICE LINES AND FIRE HYDRANTS. Plans shall be submitted to the City of Hayward Fire Prevention Bureau for review and approval of any installation of fire service lines and fire hydrants. Fire hydrant

locations shall be approved by the Fire Marshal or authorized representative. The applicant will pay costs for such hydrants.

“A permit is required for the installation of any fire service line, fire hydrant, and use or operation of fire hydrants or valves intended for fire suppression services, which are installed on water systems. The applicant shall pay the cost of such permits.

“SEC. 11-2.27 MINIMUM SIZE OF WATER MAINS. The inside diameter of every water main to be installed shall be not less than eight inches , except as may be determined by the Director of Public Works or authorized representative.

“SEC. 11-2.28 PARCEL FRONTAGE EXTENSION OF WATER MAIN. In every case where a main is to be extended to serve a parcel, said main shall extend the full frontage of said parcel.

“SEC. 11-2.29 ESTIMATE OF INSTALLATION COSTS. Upon receipt of the plans and specifications, if the Director of Public Works or authorized representative determines that the City can install the water system using City employees, the Director of Public Works shall cause an estimate of installation costs to be prepared, including (1) material costs, plus 5 percent thereof for storage and handling; (2) labor costs; (3) engineering costs: and (4) administrative costs.

“Such plans, specifications and cost estimates shall be furnished to applicant who may elect to proceed with the installation or abandon the same. In the case applicant abandons, all deposits made by applicant less engineering costs shall be refunded to the applicant.

“SEC. 11-2.30 INSTALLATION BY CITY OF HAYWARD. COSTS TO BE ADVANCED BY APPLICANT. In the case applicant elects to proceed with the water main installation, and the Director of Public Works or authorized representative determines that the City can install the water system using City employees, the City shall install the same. City shall not be required to order the materials required until the applicant has deposited an amount equal to the estimated cost of such materials, nor shall the City install said facilities until the applicant has deposited an additional amount which, when added to any previous deposits on the same application, is equal to the estimate of materials, labor, engineering and administration.

“SEC. 11-2.31 APPLICANT MAY INSTALL WATER MAIN EXTENSION FACILITIES. As an alternative to Section 11-2.30 hereof, if the Director of Public Works or authorized representative determines that it is infeasible for City employees to install water main extension facilities within a reasonable time, or that it is not economical for said employees to do so, Director of Public Works may permit applicant to install said facilities in accordance with the plans and specifications, at the applicant's cost and expense. After water pressure and water quality testing is complete, the final connection to the City's water system will be completed by City employees.

“In such event, applicant shall deposit an amount which, when added to any previous deposits on the same application, is equal to all estimated inspection costs, engineering costs, plus an administrative charge equal to 3 percent of the total cost of installation, before applicant begins such work.

“SEC. 11-2.32 APPLICANT TO FILE SURETY BOND. In the event applicant installs water main extension facilities, the applicant shall furnish the City a surety company bond in an amount equal to at least the estimate of the installation costs, including materials and

labor, to guarantee faithful performance by the applicant, and a surety company bond in an equal amount to guarantee claims of persons employed by applicant and claims of persons who furnish materials, supplies, and implements used by applicant on such work.

"SEC. 11-2.33 WATER MAIN EXTENSION FACILITIES. BILL OF SALE

When water main extension facilities are installed and upon the execution and delivery by applicant of a good and sufficient bill of sale, in a form acceptable to the City, of said facilities to the City, water shall be furnished to applicant's property.

"SEC. 11-2.34 BENEFIT DISTRICT PROCEDURES. WATER MAIN EXTENSIONS. When the City Engineer determines that a water main extension may benefit not only the property being served initially but also other properties, the City Council may adopt a resolution to initiate proceedings to form a "local improvement benefit district." Such proceedings shall be implemented in strict accordance with Chapter 8, Article 16 of the Hayward Municipal Code.

"SEC. 11-2.35 WATER SYSTEM FACILITIES FEE. A Water System Facilities Fee is hereby imposed upon every applicant for a new water service. The Facilities Fee shall be paid in addition to installation fees authorized in Section 11-2.04.

"Said Facilities Fee shall be based on a rate schedule as specified from time to time by resolution of the City Council.

"Where a larger meter replaces an existing meter, the applicant shall pay a Facilities Fee in the amount of the difference between the Facilities Fee for the existing meter and the new meter.

"Said fee shall be due and payable at the time the water service permit is to be issued for the new service applied for. All revenues derived from Facilities Fees shall be deposited in the "Water System Capital Improvement Fund" and used only for water system purposes authorized in that Fund. Facilities Fees are non-refundable.

"SEC. 11-2.36 PAYMENT OF WATER BILLS. All water bills shall be paid at the City of Hayward Revenue Office, or other place or places designated by the Director of Public Works. All bills become delinquent 15 days after the billing date, and if not paid within five days after the delinquent date, the water may be shut off without further notice. Such action will be taken in accordance with noticing requirements of the State of California Public Utilities Commission.

"When water has been restricted or shut off because of delinquency in payment of the water bill, the same may not be restored until all regular charges, together with any special costs incurred through attempts on the part of the City's Revenue Manager or representative to collect payment or restore service, have been paid in full, or payment arrangements have been approved by the Revenue Manager. Such special charges may cover the costs of, but are not necessarily limited to, orifice installations, complete shutoffs, meter removals, replacement of damaged materials, and ultimate service restorations.

"SEC. 11-2.37 BILLING PERIOD. METERED SERVICE. A billing period shall be two months, more or less, for each regular metered service. If a billing period contains less than 55 days or more than 65 days, a pro rata correction of the billing shall be made.

"SEC. 11-2.38 METERED SERVICE CHARGES INSIDE CITY. For water

supplied through a meter and used or consumed inside the city, every customer shall pay for each billing period a service charge and a usage charge based on the amount of water supplied. These charges shall be based on a rate schedule as specified from time to time by resolution of the City Council.

"SEC. 11-2.39 FIRE SERVICE CONNECTIONS INSIDE CITY. For each fire service connection inside the city, whether or not any water is used for fire fighting, customer shall pay for each billing period a service charge based on a rate schedule as specified from time to time by resolution of the City Council. When property is vacant, the property owner shall be responsible for fire service charges.

"SEC. 11-2.40 METERED SERVICE CHARGES OUTSIDE CITY. For water supplied through a meter and used or consumed outside the city, every customer shall pay for each billing the following charges:

- "(a) A service charge based on the size of meter.
- "(b) An amount based on the number of cubic feet of water supplied during each billing period.
- "(c) A surcharge equal to 50 percent of the sum of the service charge and the usage charge based on the cubic feet of water supplied as set forth in subparagraphs (a) and (b) above.

"SEC. 11-2.41 FIRE SERVICE CONNECTIONS OUTSIDE CITY. For each fire service connection outside the city, whether or not any water is used for fire fighting, customer shall pay for each billing period a charge based on a rate schedule as specified from time to time by resolution of the City Council. When property is vacant, the property owner shall be responsible for fire service charges.

"SEC. 11-2.42 PERSONS RESPONSIBLE FOR PAYMENT. The person responsible for payment of service and water usage charges shall be that person who requested connection to the Hayward Water System or the successor in interest, or any person, persons or legal entity requesting that such bill be charged to them.

"SEC. 11-2.43 EMERGENCY SHUT-OFF OF WATER. In case of fire, or alarm of fire, or in making repairs, or in constructing new work, the City shall have the right to shut off water from any customer or number of customers without notice and to keep it shut off as long as it may be necessary.

"In case of fire, or alarm of fire, the use of fountains or yard sprinklers is prohibited should circumstances warrant.

"The City shall have the right to limit the amount of water furnished to any customer, should circumstances warrant such action, although no limit is stated in the applications or permit.

"SEC. 11-2.44 WATER SHUT-OFF. NOTICE TO FIRE DEPARTMENT. It shall be the responsibility of the Director of Public Works or authorized representative to notify the Fire and Police Dispatch Communication Center when water mains and/or hydrants are to be shut off. Such notice shall include the location of said mains and the estimate of time the water

will be shut off. When the water is turned on, the Fire and Police Dispatch Communication Center shall be so notified.

"SEC. 11-2.45 FIRE CHIEF. EMERGENCY AUTHORITY. The Fire Chief, in consultation with the Director of Public Works, shall have full authority in case of fire to direct the setting of gates and valves to water mains in order to secure the greatest possible pressure at the points required.

"It shall be the responsibility of the Fire Chief to see that after each fire, all hydrants and gates are restored to their original condition, and report said fact to the Director of Public Works."

Section 2. EFFECTIVE DATE. This ordinance shall become effective 30 days from the date of its adoption.

Section 3. SEVERANCE. Should any portion of this ordinance be declared by court or tribunal of competent jurisdiction to be unconstitutional, invalid or beyond the authority of the City, such decision shall not effect the validity of the remainder of the ordinance, which shall continue in full force and effect, provided that the remainder of the ordinance absent the excised portion, can be reasonably interpreted to give effect to the intentions of the City Council

INTRODUCED at a regular meeting of the City Council of the City of Hayward, held the ____ day of _____, 2003, by Council Member _____.

ADOPTED at a regular meeting of the City Council of the City of Hayward held the ____ day of _____, 2003, by the following votes of members of said City Council.

AYES: COUNCIL MEMBERS:

NOES: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

APPROVED: _____
Mayor of the City of Hayward

DATE: _____

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward

HAYWARD MUNICIPAL WATER SYSTEM
(Chapter 11, Section 11-2.09)

A P P E N D I X 'A'

BACKFLOW AND CROSS-CONNECTION CONTROL REGULATIONS

(a) **PURPOSE.** To protect the public water supply system from pollution or contamination due to the potential and or actual cross-connections within the customer's internal or private water system(s). To eliminate or control potential or actual cross-connections within the customer's private potable water system(s) and other sources of water that are not approved as safe for human consumption. This shall be accomplished by the establishment of a Cross-Connection Control Program as required by state regulations. This ordinance is adopted pursuant to Title 17, Sections 7583 – 7605, inclusive, of the California Code of Regulations, entitled "Regulations Relating to Cross-Connections."

(b) **DEFINITIONS.** For purposes of this section, certain words and phrases are defined and certain provisions shall be construed as herein set out, unless it shall be apparent from the context that a different meaning is intended.

1. **AIR-GAP SEPARATION.** A physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe measured vertically above the top rim of the vessel, and in no case less than one inch.
2. **APPROVED BACKFLOW PREVENTION ASSEMBLY.** An assembly which has passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated its competency to perform such tests to the California Department of Health Services.
3. **AUXILIARY WATER SUPPLY.** Any water supply on or available to the premises other than the approved water supply.
4. **BACKFLOW.** A flow condition, caused by a differential in pressure, that causes the flow of water or other liquids, gases, mixtures or substances into the distributing pipes of a potable water supply from any source or sources other than an approved water supply source.
5. **BACKPRESSURE.** Any elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow.

6. **BACKSIPHONAGE.** A form of backflow due to a reduction in system pressure which causes a subatmospheric pressure to exist at a site in the water system.
7. **CONTAMINATION.** Degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health, or which may impair the usefulness or quality of the water.
8. **CROSS-CONNECTION.** Any unprotected actual or potential connection between a potable water system and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other assemblies through which backflow could occur, shall be considered to be cross-connections.
9. **DOUBLE CHECK VALVE ASSEMBLY.** An assembly of two internally loaded, independently acting check valves, including resilient seated shut-off valves on each end of the assembly and test cocks for testing the water tightness of each check valve.
10. **DOUBLE CHECK DETECTOR ASSEMBLY.** A specially designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accurately for only very low rates of flow up to 3 gpm and shall show a registration for all rates of flow. This assembly shall only be used to protect against a non-health hazard. This assembly is used primarily on fire sprinkler systems.
11. **POLLUTION.** An impairment of the quality of the water to a degree which does not create a hazard to the public health but which adversely and unreasonably affects the aesthetic qualities of such waters for domestic use.
12. **PREMISES.** Any and all areas on a customer's property which are served or have the potential to be served by the public water system.
13. **PUBLIC WATER SYSTEM.** A system for the provision of piped water to the public for human consumption that has five or more water service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year.

14. REDUCED PRESSURE PRINCIPLE ASSEMBLY. An assembly incorporating two internally loaded, independently operating check valves and an automatically operating differential relief valve located between the two checks, including resilient seated shut-off valves on each end of the assembly, and equipped with necessary test cocks for testing the assembly.
15. REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLY. A specially designed assembly composed of a line size approved reduced pressure principle assembly with a bypass containing a specific water meter and an approved reduced pressure principle assembly. The meter shall register accurately for only very low rates of flow up to 3 gpm and shall show a registration for all rates of flow. This assembly shall be used to protect against a non-health hazard or a health hazard. This assembly is primarily used on fire sprinkler systems.
16. WATER – POTABLE. The term “potable water” shall mean water from any source which has been investigated by the California Department of Health Services, and which has been approved for human consumption.
17. WATER - NON POTABLE. The term “non potable water” shall mean a water supply which has not been approved for human consumption by the California Department of Health Services.

(c) RESPONSIBILITY. The City of Hayward shall be responsible for implementing and enforcing the Cross-Connection Control Program. If, in the judgement of the Director of Public Works or authorized representative, an approved Backflow Prevention Assembly is required (at the customer's water service connection or within the private water system) the City of Hayward shall give notice in writing to said customer. The appropriate Backflow Prevention Assembly shall be immediately installed by and at the expense of the customer at each connection where required to prevent backflow from the customer's premises to the public potable water system. It shall be the customer's responsibility to comply with the City of Hayward's requirements and failure to do so shall constitute grounds for the termination of water service until such requirements have been met.

(d) PROTECTION REQUIREMENTS.

1. General Provisions

- i. Unprotected cross-connections with the public water supply are prohibited.

- ii. Whenever backflow protection has been found necessary on a water supply line entering a customer's premises, any and all water supply lines from the City of Hayward's mains entering such premises, buildings, or structures shall be protected by an approved backflow assembly. (Exception: Class 1 and Class 2 Fire Sprinkler Systems.)
- iii. The customer's system should be open for inspection at all reasonable times to authorized representatives of the City of Hayward to determine whether unprotected cross-connections or other structural or sanitary hazards, including violations of the regulations, exist. When such a condition becomes known, the City of Hayward shall deny or immediately discontinue service to the premises. Service will not be restored until such condition(s) of defect are corrected.

2. Where Protection is Required

- i. Each water service connection from the City of Hayward's water system for supplying water to a premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system unless the auxiliary water supply is accepted as an additional source by the City of Hayward, and is approved by the California Department of Health Services.
- ii. Each water service connection from the City of Hayward's water system for supplying water to any premises on which any substance is handled in such manner as may allow its entry into the water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of process waters and waters originating from the City of Hayward's water system which have been subjected to deterioration in sanitary quality.
- iii. Backflow prevention assemblies shall be installed on the water service connection to any premises having (a) internal cross-connection that cannot be permanently corrected and controlled to the satisfaction of the City of Hayward, or (b) intricate plumbing and piping arrangements or where entry to all portions of the premises are not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not cross-connections exist.

3. Type of Protection Required

- i. The type of protection that shall be provided to prevent backflow into the approved water supply shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of protective assembly that may be required includes: Air-gap separation, Reduced Pressure Principle Assembly, Reduced Pressure Principle Detector Assembly, and Double Check Valve Detector Assembly. The water consumer may choose a higher level of protection than required by the City of Hayward. Premises shall be evaluated on a case by case basis and the appropriate backflow protection shall be determined by the City of Hayward.

(e) ADMINISTRATIVE PROCEDURES.

1. General Provisions. The cross-connection control program shall be administered by the City of Hayward and the Cross-Connection Control Specialist. The following are the procedures for achieving a more meaningful involvement and participation of all administrative authorities and customers in the field of cross-connection control.
2. Water System Survey
 - i. The City of Hayward shall review all requests for new services to determine if backflow protection is needed. Plans and specifications must be submitted to the City of Hayward upon request for review of possible cross-connection hazards as a condition of service for new water service connections. If it is determined that a backflow prevention assembly is necessary to protect the public water system, the required the required assembly must be installed before water will be supplied to the premises.
 - ii. The City of Hayward may require an on-premises inspection to evaluate cross-connection hazards. The cross-connection control specialist may request an inspection appointment to each affected customer. An inspection of the premises by the cross-connection control specialist will evaluate the hazards existing. Any customer who cannot or will not allow an on-premise inspection of his piping system shall be required to install the backflow prevention assembly the cross-connection control specialist considers necessary.

- iii. The City of Hayward may, at its discretion, require another inspection for cross-connection hazards of any premise to which it provides water service. The Cross-Connection Control Specialist may request an inspection appointment to each affected customer. Any customer who cannot or will not allow an on-premise inspection shall be required to install the backflow prevention assembly the cross-connection specialist considers necessary.
- iv. The City of Hayward will notify the customer of the survey findings, listing the corrective actions to be taken if any are required. A reasonable period of time will be given to complete all corrective actions required, including installation of backflow prevention assemblies. Failure to comply with any the required corrective actions within the time given may result in discontinuation of water service.

3. Water Service Termination

- i. When the City of Hayward's representative encounters water use(s) that, in the representative's opinion, represent a clear and immediate hazard to the potable water supply, the City of Hayward shall immediately discontinue water service until such time as the condition(s) for reinstatement outlined by the City of Hayward are satisfied.
- ii. Conditions or water uses that create a basis for water service termination shall include, but are not limited to, the following items:
 - 1. A situation which presents an immediate health hazard to the public water system.
 - 2. Direct or indirect connections between the public water system and a sewer line.
 - 3. Unprotected direct or indirect connections between the public water system and any system or equipment containing contaminants.
 - 4. Unprotected direct or indirect connections between the public water system and an unapproved auxiliary water system.

5. Refusal to install a required backflow prevention assembly.
6. Refusal to repair or replace a faulty backflow prevention assembly.

4 Water Service Termination Procedures

- i. For conditions 1, 2, or 3, or 4, the City of Hayward shall make a reasonable effort to advise the customer of intent to terminate water service. The water supply shall be terminated and the service locked until correction of violation has been approved by the City of Hayward.
- ii. For conditions 5 or 6, the City of Hayward will terminate service to a customer's premises after two written notices have been sent specifying the corrective action needed and the time period in which it must be done. The first notice shall give a time period of 30 days to complete all corrective actions required. The second notice shall give a time period of 14 days to complete all corrective actions required. If no corrective action has been taken within the 14-day time period, the City of Hayward may terminate water service to the affected customer until the required actions are taken.

(e) BACKFLOW PREVENTION ASSEMBLIES

1. Approved Backflow Prevention Assemblies. Only Backflow Prevention Assemblies which are a make, model, and size approved by Department of Health Services and the City of Hayward shall be acceptable for installation by a customer connected to the City of Hayward's potable water system. The City of Hayward shall provide to any customer, upon request, a list of approved Backflow Prevention Assemblies.
2. Backflow Prevention Assembly Installation. All Backflow Prevention Assemblies shall be installed above grade and as close as practical to the user's connection. The City of Hayward shall have the final authority in determining the required location of a Backflow Prevention Assembly. This assembly shall be installed so that it is readily accessible for testing and maintenance.

3. Backflow Prevention Assembly Testing and Maintenance. All Backflow Prevention Assemblies shall be tested annually and immediately after installation, relocation or repair. In those instances where the City of Hayward deems the hazard to be great enough, the City of Hayward may require tests at more frequent intervals.
4. Backflow Prevention Assembly Removal
 - i. Approval must be obtained from the City of Hayward before a Backflow Prevention Assembly can be removed, relocated or replaced. In addition a Plumbing Permit must be obtained from the City of Hayward before any work can be started.
 - ii. Removal: The use of a assembly may be discontinued and removed from service upon presentation of sufficient evidence to the City of Hayward to verify that a hazard no longer exists or is not likely to be created in the future.
 - iii. Relocation: An assembly may be relocated following confirmation by the City of Hayward that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the assembly.
 - iv. Repair: An assembly may be removed for repair, provided the water use is either discontinued until repair is completed and the assembly is returned to service, or the water service connection is equipped with other backflow protection approved by the City of Hayward. A retest will be required following the repair of the assembly.
 - v. Replacement: An assembly may be removed and replaced provided the water use is discontinued until the replacement assembly is installed. All replacement assemblies must be approved by the City of Hayward and must be commensurate with the degree of hazard involved.